## Chetco Bar Fire Salvage Project Alternatives Considered but Eliminated from Detailed Analysis

### Other Considerations

Federal agencies are required by NEPA to rigorously explore and objectively evaluate all reasonable alternatives and to briefly discuss the reasons for eliminating any alternatives that were not developed in detail (40 CFR 1502.14). The following alternatives or components of alternatives were considered but eliminated from detailed consideration.

### Alternative A

# An alternative that salvage harvests matrix stands with 25-50% basal area loss was brought forward during scoping.

While this alternative would accomplish the need for recovering economic value of timber burned in the fire, it would not achieve the balance of sustainability between economic returns and ecological values that is an objective in the Siskiyou National Forest Plan. In areas where basal area loss ranged from 0-50%, the fire effects to the forest ecosystem are often beneficial and are generally described as low severity fires. The effects to the forest include: increased light and available nutrients for early-seral and fire-adapted species, reduction of understory and midstory fuels, conditions that are conducive to development of complex forest structures and diverse species composition due to reductions in stand density and creation of small openings, and improved wildlife habitats for many species.

### Alternative B

# An alternative that only proposed salvage harvests on slopes less than 40% was brought forward during scoping.

While this alternative would accomplish the need for recovering economic value of timber burned in the fire, it would do so at a reduced level. The action alternatives would use ground based logging systems on slopes less than 30%, and skyline or helicopter logging systems on slopes greater than 30%. Use of appropriate logging systems and additional BMPs and design criteria listed in the EA would be implemented to avoid, minimize, reduce or eliminate impacts caused by implementation of salvaging on slopes greater than 30%.

#### Alternative C

# An alternative that salvage harvests trees within Inventoried Roadless Areas (IRA) was brought forward during scoping.

While this alternative would accomplish the need for recovering economic value of timber burned in the fire, it would not achieve the balance of sustainability between economic returns and ecological values that is an objective in the Siskiyou National Forest Plan. In IRA, the cutting, sale, or removal of generally small diameter timber generally must be needed for one of the following purposes (i) To improve threatened, endangered, proposed, or sensitive species habitat; or (ii) To maintain or restore the characteristics of ecosystem composition and structure, such as to reduce the risk of uncharacteristic wildfire effects, within the range of variability that would be expected to occur under natural disturbance regimes of the current climatic period; and will maintain or improve one or more of the roadless area characteristics as defined in § 294.11.

Salvage harvesting in IRA is highly controversial and the proposed Chetco Bar fire salvage project was not designed to maintain or improve roadless area characteristics, nor was it designed to improve threatened, endangered, proposed, or sensitive species habitat. The purpose of the Chetco Bar fire salvage project is to capture timber value in the matrix land allocations by harvesting dead, dying and/or damaged trees resulting from the 2017 Chetco Bar fire. The Deciding Official therefore did not propose salvage harvest with IRA, in fact the scoping letter explicitly stated "No activities or harvesting of trees would occur in any inventoried roadless areas."

### Alternative D

# An alternative that that salvage harvests trees without constructing temporary roads was brought forward during scoping.

While this alternative would accomplish the need for recovering economic value of timber burned in the fire, it would do so at a reduced level. Additionally, no new road construction is proposed. Temporary roads are considered a connected action because in order to accomplish the purpose of the project (capture timber value in the matrix land allocations by harvesting dead, dying and/or damaged trees resulting from the 2017 Chetco Bar fire), temporary roads are needed for operational efficiency and safety. Temporary roads are generally minimum-standard roads designed for short-term use during a specific project, such as a timber harvest. Temporary roads are constructed by the purchaser for the purpose of harvesting included timber. After a Temporary Road has served its purpose, the purchaser shall give notice to Forest Service and shall remove all improvements, eliminate ditches, out-slope roadbed, remove ruts and berms, effectively block the road to normal vehicular traffic where feasible under existing terrain conditions, and build cross ditches and water bars, as staked or otherwise marked on the ground by Forest Service. The National Forest Management Act (NFMA) requires that any temporary road built as part of a timber sale or other permit/lease shall be designed with the goal of reestablishing vegetative cover on the roadway and adjacent disturbed area within ten years after the termination of the contract, permit, or lease. BMPs and design criteria listed in the EA would be implemented to avoid, minimize, reduce or eliminate impacts caused by temporary road construction.

#### Alternative E

A "non-commercial", "restoration-only" alternative that invests in restoration and recovery of the fire area by, for instance, eliminating livestock grazing, emphasizing native species recovery, not building any new roads, stabilizing soils disturbed by the fire suppression effort, and decommissioning unneeded roads was brought forward during scoping.

A "non-commercial", "restoration-only" alternative does not meet the purpose and need for the project. Restoration and recovery of the burned landscape including stabilizing soils, began with BAER projects and will continue if needed, with future restoration type projects. Eliminating livestock grazing and decommissioning roads is considered outside the scope of the project. No permanent roads are proposed, temporary roads are addressed above under Alternative D. The purpose of the Chetco Bar fire salvage project is to capture timber value in the matrix land allocations by harvesting dead, dying and/or damaged trees resulting from the 2017 Chetco Bar fire.

### Alternative F

# An alternative that salvage harvests only trees less than 20 inches DBH was brought forward during scoping.

This alternative closely resembles Alternative 3 because alternative 3 focuses on managed stands of mostly small diameter trees. Additionally, project design criteria addresses the level of snags needed to meet resource objectives. While this alternative would accomplish the need for recovering economic value of timber burned in the fire, it would do so at a reduced level (similar to alternative 3).

There are many acres of high severity fire that will not be salvaged that can provide areas with large snags. Riparian reserves (including unstable slopes) and LSR will provide a network of untreated lands that will also provide large snags. Additionally, there are many acres in matrix that burned at 0-49% basal area loss that will also provide some level of large snags. NWFP has guidelines for downed wood and snags in the matrix. Snag retention levels will be based on forest plan standards, NWFP standards, most recent science, and DecAID.

#### Alternative G

An alternative that recommends either decommissioning or gating roads where open road density is greater than 1.5 miles per section was brought forward during scoping.

This alternative would not meet the purpose and need for the project.

#### Alternative H

An alternative that recommends analyzing the economic effects to "not just the logs but other natural resources as well." was brought forward during scoping.

The purpose of the Chetco Bar Fire Salvage project is to capture timber value in the matrix land allocations by harvesting dead, dying and/or damaged trees resulting from the 2017 Chetco Bar fire.

FSM 1970 provides policy and principles for conducting economic evaluation of projects in the Forest Service. 1970.6 states "The responsible line officer determines the scope, appropriate level, and complexity of economic and social evaluations to meet overall objectives and policy (FSM 1970.2 and 1970.3). The scope and depth of analyses depend on the potential social and economic effects of the plan, project or program under review. In many planning and management situations, applicable laws and regulations or Forest Service policy specify analysis requirements. The cost and availability of social and economic data may be considered when determining scope."

The effects to other pertinent natural resources will be described in the EA, Chapter 3.

#### Alternative I

Multiple commenters requested an alternative that salvage harvests in a low impact manner or a "Beschta" alternative.

Multiple suggestions were given as to where to allow salvage harvesting.

The following table describes how these suggestions were considered.

Suggestion	How Addressed
Only in second growth plantations	Alternative 3 was developed to address this topic.
In the Matrix	All action alternatives only propose salvage in matrix
Only in stands experiencing >90% mortality	The action alternatives focus on stands that experienced 50-100% basal area loss.
Accessible from existing roads	See Alternative D above
Exclude riparian reserves	All action alternatives exclude salvage in riparian reserves
Exclude critical habitat	Alternative 3 closely resembles this alternative
Exclude steep slopes	See Alternative B above
Exclude mature and Old growth stands	Alternative 3 closely resembles this alternative
Exclude de facto unroaded areas > than 1000 acres	The No Action alternative and Alternative 3 addresses this topic.
Remove only imminent hazard trees	Outside the scope of this project
Plant conifers at low density where natural seed sources are lacking	The action alternatives will address artificial reforestation at appropriate levels where needed if natural regeneration is not adequate
Include restoration activities such as road maintenance, road closure, erosion control, and weed control	All action alternatives include BMPs and design criteria to address road maintenance, erosion control and weed control. Road closures are outside the scope of the project.
Based on Beschta report: exclude severely burned areas, on erosive soils, on fragile soils,	All action alternatives exclude unstable soils. Additionally, best management practices (BMP) and project design criteria (PDC) were developed to minimize or eliminate resource effects of the action
Exclude Late-Successional Reserves	All action alternatives exclude late-successional reserves
Exclude Botanical Areas	All action alternatives exclude important botanical areas
Exclude Scenic River Areas	All action alternatives exclude salvage within the Chetco wild and scenic river corridor. Log haul would occur on existing roads
Protect all live trees	Live healthy trees expected to survive the effects of the fire will be retained whenever possible. Examples of areas where they cannot be retained include landings, skid trials, and temporary road locations. Dying Douglas fir and incense cedar trees will be evaluated using the Smith and Cluck (2011) guidelines for marking based on 0.6 probability for mortality.

Protect old snags over 150 years or over 20 inches dbh	Alternative 3 closely resembles this alternative
Protect at least 50% of each size class of dead trees less than 20 inches dbh	Snag retention levels will be based on forest plan standards, NWFP standards, most recent science, and DecAID.
Exclude IRA	All action alternatives exclude salvage in Inventoried Roadless Areas
Areas withdrawn from mining	The No Action alternative addresses this concern
Exclude Darlingtonia fens	All action alternatives exclude salvage in Darlingtonia fens
Address ecological integrity. FSH 1909.12 – Land management Planning Handbook – Chap. 10 – Assessments (New Planning Rule).	FSH 1909.12 applies at Forest Plan level NEPA, not project level NEPA. Additionally, the purpose of the Chetco Bar fire salvage project is to capture timber value in the matrix land allocations by harvesting dead, dying and/or damaged trees resulting from the 2017 Chetco Bar fire. The EA, Chapter 3 will address the effects of the project to terrestrial and aquatic resources. Post-salvage reforestation will be addressed in this project. Other restoration type projects may be identified in the future.

### Alternative J

Multiple commenters requested an alternative that maximizes timber harvest and proposed salvage harvest within Late-Successional Reserve (LSR) that suffered >50% mortality.

While this alternative would accomplish the need for recovering economic value of timber burned in the fire, it does not meet the purpose and need to capture timber value in the matrix land allocations, and it could not be completed in a timely matter.

All activities in LSRs must adhere to the NWFP Standards and Guidelines for this land allocation. LSRs recognize the ecological value of retaining dead and dying trees, and salvage is typically limited to prevent negative impacts on the late successional habitat. Because LSRs are designated with the explicit purpose of promoting old and late successional characteristics, including moderate to high concentrations of coarse woody material (CWM) and snags, those elements that are likely to persist need to be retained until the stand has regenerated to the point it is once again contributing large snags and CWM. Additionally, the NWFP recognizes the role that disturbance plays in creating tree defects favorable to wildlife, and fire damaged large trees serve as a key habitat element that need to be retained consistent with LSR standards and guidelines. In order to pursue area salvage in LSR, it would be necessary to verifiably demonstrate that the activity would promote improved late successional conditions in the long term.

Additionally, salvage within LSRs is subject to review by the Regional Ecosystem Office, which adds time and may cause delays in developing supporting analysis. This may negatively impact the ability to move quickly with salvage operations to retain product value. Salvage harvesting in LSR is highly controversial and the proposed Chetco Bar fire salvage project was not designed to promote improved late successional conditions in the long term.

### Alternative K

An alternative that recommends limiting salvage harvest to roadside hazards only was brought forth during the 30-day comment period on the Draft Environmental Assessment.

The purpose of the Chetco Bar Fire Salvage project is to capture timber value in the matrix land allocations by harvesting dead, dying and/or damaged trees resulting from the 2017 Chetco Bar fire.

While this alternative would accomplish the need for recovering economic value of timber burned in the fire near roads, it would do so at a reduced level and it would not meet the purpose of the project throughout the matrix land allocations. This alternative would only treat matrix land allocations along roads. Additionally, the Danger Tree Removal project has already authorized the removal of danger trees along all roads within the Chetco Bar fire perimeter.